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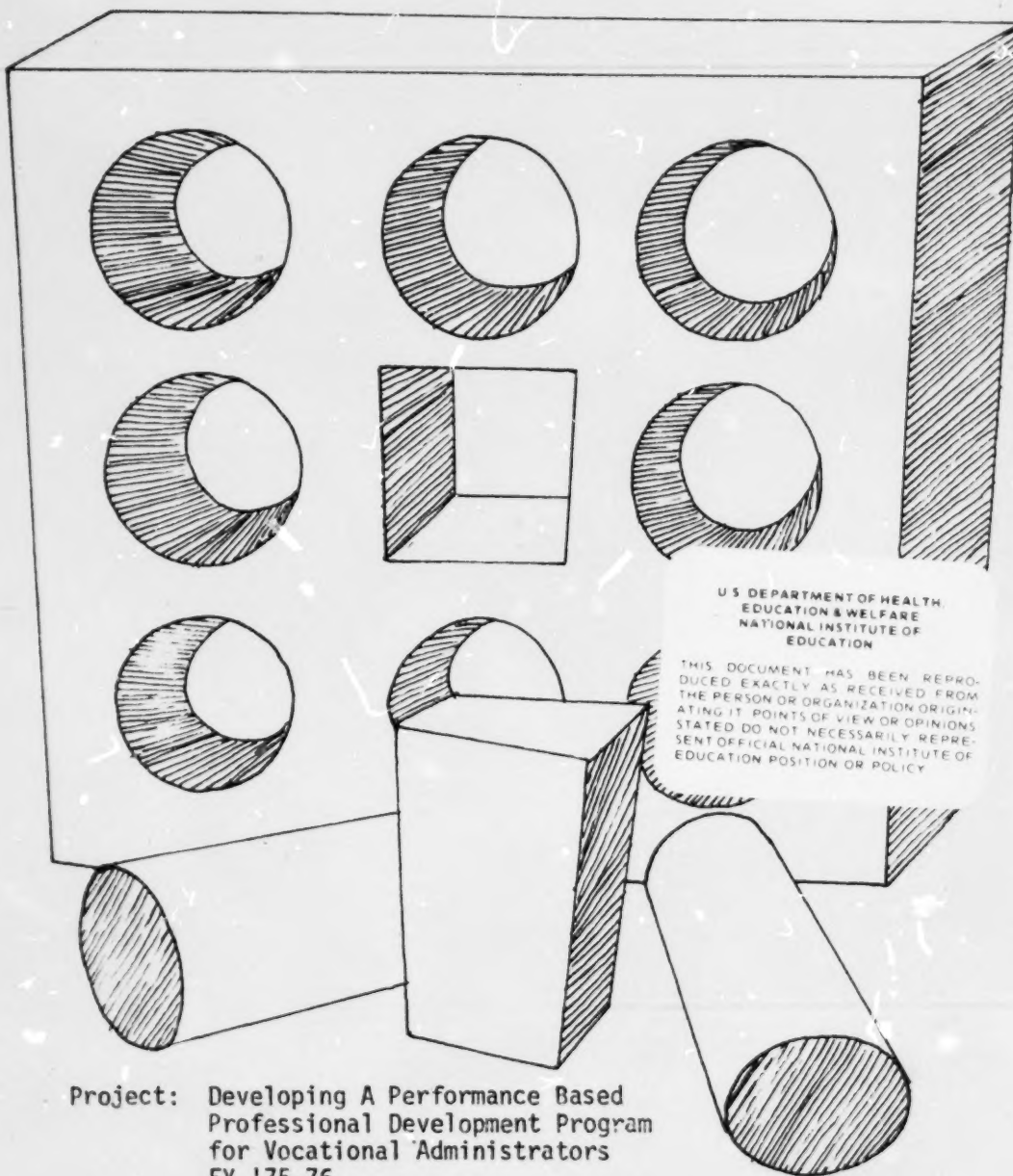
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ABSTRACT

One of twelve individualized performance-based modules, each based on a major competency needed by vocational administrators for effectively administering vocational education in local education agencies, this module focuses on developing competency in the following areas: writing educational specifications, describing the differences between learning and auxiliary areas, and listing the planning considerations involved in the planning of occupational preparation facilities. Module content is organized as follows: introductory section, terminal objective, summary of content, procedures, suggested resources, pretest, posttest, learning activities, and an answer manual. Activities are primarily based on having the learner read a list of suggested materials related to the subject. (SH)

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Project: Developing A Performance Based
Professional Development Program
for Vocational Administrators
FY '75-76

Marshall University
Department of Occupational, Adult and Safety Education
Huntington, West Virginia

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Instructor's Guide for the Use of Individualized Modules

In each of the Individualized Modules you will find all or some of the following components:

1. Introduction
2. Terminal Objective
3. Content
4. Procedures
5. Student Competency Sheet
6. Resources
7. Pre-Test and/or Post-Test
8. Learning Activities
9. Simulation
10. Answer Manual

For the most part the material is self-explanatory and if so noted, certain pages are consumable.

In some of the modules, activities other than reading and responding through written communication are required. In these instances where seminars, site visitations, workshops, etc., are required, with the instructor directing the activity, the instructor is directed to utilize the Individualized Module and to inject his/her own methods for making the activity a success.

All materials to be evaluated are to be turned into the instructor. When a student has not achieved the competency required in the specific activity, the instructor is requested to develop a plan to correct the deficiency.

INTRODUCTION

The process of planning and developing vocational and technical education facilities to enhance and meet the needs of educational programs is a constant challenge to those in administrative positions.

In recent years, there has been great demand for relevance in education. One recognized way of providing this relevance is through the provision of vocational and technical training opportunities for young people and adults. This approach is being applied with ever increasing frequency as evidenced by a greater variety of excellent occupational educational programs at the secondary and post-secondary school level. Concurrent with occupational education program expansion is the need for carefully planned facilities to accommodate those programs.¹

The quality of facilities planned and constructed to accommodate educational programs in vocational and technical education will play an extremely important part in creating an environment which will be conducive to the vocational and training process needed.

Today's planners recognize that the school building itself is a tool in the educational process and that it helps shape the quality of the educational program that goes on in it. They also recognize that the community's educational philosophy, methods of teaching, and curriculum influence school design. Physical, emotional, and social needs of the occupants, plus expanded uses for school buildings, have also begun to exert more influence on design.²

Transferring the needs of an occupational program to the physical space requirement is not an easy task. The vocational and technical administrator can not rely on trial and error. He must make decisions that move forward. Therefore, one of the major thrusts of this module is to get the student involved in planning facilities to meet specific needs.

¹ Richard F. Meckley, Planning Facilities for Occupational Education Programs, Charles E. Merrill Publisher Co., 1972.

² William Chase, Facilities Development Section U.S. Office of Education, Washington, D.C. ED 040293, 1970.

TERMINAL OBJECTIVE(S)

You will be capable of doing the following, if you complete this module:

1. Discuss in writing, educational specifications.
2. Describe differences between learning and auxiliary areas.
3. Name three types of learning areas and categorize the modes of student learning occurring in each.
4. List and discuss the planning considerations involved in the planning of occupational preparation facilities.
5. Demonstrate the ability to use a planning guide designed for systematic planning of facilities to house occupational preparation programs.

CONTENT

In this module you will find:

1. Student Competency Sheet
2. Resources
3. Pre-Test
4. Learning Activities
5. Post-Test

PROCEDURES

After reading the Introduction, Terminal Objective and Content:

1. Decide whether you already have the competency identified in the terminal objective and proceed directly to the Pre-Test, OR--
2. Proceed to the Post-Test and assess your present skills to determine which problem pertains to the part in which you are deficient, OR--
3. Go straight through the packet.

STUDENT COMPETENCY SHEET

Program: Vocational Administrators Curriculum

Unit: Translating Educational Programs into Facility Requirements

Competency Statement: Demonstrate competency in translating educational programs into facility requirements by: (1) discussing in writing educational specification, (2) describing the differences between learning and auxiliary areas, and (3) listing the planning considerations involved in the planning of occupational preparation facilities.

Learning Activities: Within this module are several different varieties of learning activities aimed at leading you to attain and demonstrate the competencies named above. These activities require reading from the suggested resources, writing several short papers, and attending a seminar.

Criterion Evaluation: There are specific tasks associated with the learning activities in this module. Each of these specific tasks is an enabling objective which states exactly what behavior the learner is expected to exhibit, under what conditions he/she is expected to do it, and how well it is to be done. Thus, each task statement in this module states the exact standards by which the learner's performance is going to be judged. This is the criterion evaluation.

Resources

Instructor

Selected References:

Meckley, Richard. Planning Facilities for Occupational Education Programs, Charles E. Merrill Publishing Co., 1972.

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Larson, Milton, and Blake, Duane L. Planning Facilities and Equipment for Comprehensive Vocational Education Program for the Future, ED 040293, 1970.

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lities with New Media, 1966.

Robertson, J. Marvin, Facilities Evaluation
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lities Planning, A Selected Annotated
Bibliography, ED 108395, 1975.

(PRE-TEST)

1. Discuss in writing, educational specifications giving specific emphasis to:
 - a. defining educational specifications
 - b. listing the values
 - c. listing areas included in educational specifications.
2. Describe in writing the differences between learning and auxiliary areas?
3. Name three types of learning areas and categorize the modes of student learning occurring in each?
4. List and describe the planning considerations involved in the planning of occupational preparation facilities, with specific emphasis being placed upon both learning and auxiliary area?

LEARNING ACTIVITY I

Task I

THE STUDENT WILL DISCUSS IN WRITING, EDUCATIONAL SPECIFICATIONS WITH 100% ACCURACY.

I-A

Read:

A.1 Guide for Planning Educational Facilities, Council of Educational Facility Planners, pages 47-50.

A.2 Basic Planning Guide for Vocational and Technical Education Facilities, William W. Chase, Johnny W. Browne and Michael Russo, pages 20-21.

I-B

After completing I-A, the student will discuss in writing, educational specifications as discussed in the references. Specific emphasis shall be placed upon defining educational specifications and listing the values and areas included in educational specifications. This will be turned into the instructor for evaluation.

If you successfully completed the task in Learning Activity I, you should proceed to Learning Activity II. If you need to acquire more knowledge or skill in order to perform as expected in Task I, reread the material in I-A and try I-B again. If you still feel you need more information to complete the Task, see your instructor to develop a plan to correct your deficiencies.

LEARNING ACTIVITY II

Task II

THE STUDENT WILL DESCRIBE IN WRITING THE DIFFERENCES BETWEEN LEARNING AND AUXILIARY AREAS WITH 100% ACCURACY AND WILL BE TURNED INTO THE INSTRUCTOR FOR EVALUATION.

II-A

Read:

A.1 Planning Facilities for Occupational Education Programs, Richard F. Meckley, pages 85-127

or

A.2 Guide for Planning Educational Facilities, Council of Educational Facilities Planners, pages 71-110.

II-B

After completing the reading in II-A the student will describe in writing differences between learning and auxiliary areas with 100% accuracy as presented in selected references of Activity A.

If you successfully completed the Task in Learning Activity II, you should proceed to Learning Activity III. If you need to acquire more knowledge or skill in order to perform as expected in Task II, reread the material in II-A and try II-B again. If you still feel you need more information to complete the Task, see your instructor to develop a plan to correct your deficiencies.

LEARNING ACTIVITY III

Task III

THE STUDENT WILL NAME THREE TYPES OF LEARNING AREAS AND CATEGORIZE THE MODES OF STUDENT LEARNING OCCURRING IN EACH WITH 100% ACCURACY.

III-A

Read:

A.1 Planning Facilities for Occupational Education Programs, Richard F. Meckley, pages 85-109.

or

A.2 Guide for Planning Educational Facilities, Council of Educational Facilities Planners, pages 71-92.

III-B

After completing the reading in III-A the student will name three types of learning areas and categorize the modes of student learning occurring in each as presented in Task III, A.1 or A.2. These will be written with 100% accuracy and turned in to the instructor for evaluation.

If you successfully completed the Task in Learning Activity III you should proceed to Learning Activity IV. If you need to acquire more knowledge or skill in order to perform as expected in Task III reread the material in III-A and try III-B again. If you still feel you need more information to complete the Task, see your instructor to develop a plan to correct your deficiencies.

LEARNING ACTIVITY IV

Task IV

THE STUDENT WILL LIST AND DESCRIBE THE MORE IMPORTANT PLANNING CONSIDERATIONS INVOLVED IN THE PLANNING OF OCCUPATIONAL PREPARATION FACILITIES WITH 90% ACCURACY.

IV-A

Read:

A.1 Planning Facilities for Occupational Education Programs, Richard F. Meckley, pages 85-109.

or

A.2 Basic Planning Guide for Vocational and Technical Education Facilities, William W. Chase, Johnny W. Brown, and Michael Russo, pages 16-19 and 22-24.

or

A.3 Guide for Planning Educational Facilities, Council of Educational Facility Planners, pages 113-132.

or

A.4 Facilities for Occupational Education Grade 7-12, Darrell Spencer, pages 34, 38.

IV-B

After completing the reading in IV-A the student will list and describe the more important planning considerations involved in planning of occupational preparation facilities. Emphasis shall be given to both learning and auxiliary areas. These will be written with 90% accuracy and will be turned into the instructor for evaluation.

If you successfully completed the Task in Learning Activity IV you should proceed to Learning Activity V. If you need to acquire more knowledge or skill in order to perform as expected in Task IV, reread the material in IV-A and try IV-B again. If you still feel you need more information to complete the Task, see your instructor to develop a plan to correct your deficiencies.

LEARNING ACTIVITY V

Task V

V-A

After reading and discussing in a seminar setting with the instructor A General Guide for Planning Facilities for Occupational Preparation Programs the student will demonstrate his ability to use the General Guide in planning facility requirements for a selected programs. Specific emphasis should be placed upon forms C, D, E, and F and if time permits G and I. (This will actually be an assessment of an on-going program after which the student will have an opportunity to visit with the program teacher and discuss the actual activities being conducted in the facilities.)

V-B

Read:

- A.1 A General Guide for Planning Facilities for Occupational Preparation Programs, Richard F. Meckley, Ivan E. Valentine, and M. J. Conrad.
plus
- A.2 Facilities Evaluation in Vocational and Technical Education, J. Marvin Robertson, ED 087897, 1973.

V-C

With the assistance of the instructor the student will select an occupational education program area, ie (auto mechanics or home economics, etc.) Having done this, the instructor will make arrangements to visit a selected vocational-technical education facility housing the program that the student will be expected to complete Forms C, D, E, and F as a result of his interview and observations. Using the book A General Guide for Planning Facilities for Occupational Preparation Programs, the student will then plan the facility requirement of the selected programs using his observations and visitation with the instructor of the selected program and vocational administrator as his resource.

After the student has completed this activity, time should be arranged for his instructor and the teacher of the selected program to discuss the students analysis and the planned facility and answer any questions he might have in regard to the suggested facilities.

Note: If educational specifications for the program visited are available, they should be shared with the student to permit him or her to compare their efforts.

SUGGESTIONS

This activity could be planned as follows:

- a. Seminar setting, possibly 5 students
 1. Discuss the suggested reference.
 2. Select occupational education program areas.
 3. Select a vocational school that offers the chosen programs and visit the school as a class.
- b. Visitation of vocational programs per-
ferrably at one location for all 5 students
with the instructor making the arrangements
to meet with people involved to discuss
plans and ask questions of administrator
prior to visiting individual instructions
and looking at present facilities. The
student should be instructed to use:

Form C

Form D

Form E

and

Form F

of the General Guide for planning for
occupational preparation program.

- c. Reconvene and let each student discuss with
his instructor and the selected program
instructor his observations and suggestions
of facility requirements for that specific
program.
- d. After each student discusses their obser-
vations, let the group discuss from G & I
in relation to the total program.

After completing Task V, you are to evaluate
your ability to achieve the competencies
identified in the Terminal Objective by
completing the Post-Test.

(POST-TEST)

1. Discuss in writing, educational specifications giving specific emphasis to:
 - a. defining educational specifications.
 - b. listing the values.
 - c. listing areas included in educational specifications.
2. Describe in writing the differences between learning and auxiliary areas?
3. Name three types of learning areas and categorize the modes of student learning occurring in each?
4. List and describe the planning considerations involved in the planning of occupational preparation facilities, with specific emphasis being placed upon both learning and auxiliary area?

Translating Educational Programs into Facility
Requirements

ANSWER MANUAL

Marshall University
Department of Occupational, Adult and Safety Education
Huntington, West Virginia

This booklet will provide the instructor with directions on how to conduct courses using the Competency-Based Learning Module process.

The Learning Module contains an introduction, procedure page, pre- and post-tests, terminal objectives, tasks, and activities to complete the tasks. The Learning Module is self-explanatory and if so noted certain pages are consumable.

In some of the modules activities other than reading, and responding through written communication is required. In these instances where seminars, site visitations, workshops, etc. are required, with the instructor directing the activity, the instructor is directed to utilize the Learning Module and to inject his own methods for making the activity a success.

All materials to be evaluated are to be turned into the instructor. When a student has not achieved the competency required in the specific activity the instructor is requested to develop a plan to correct the deficiency.

Answers to Pre-Test and Post-Test

- (1) Discuss in writing, educational specifications giving specific emphasis to:
 - a. defining educational specifications
 - b. listing the purposes
 - c. listing areas included in educational specifications

Educational specifications may be defined as the written outline of the vocational and technical education program and the facilities needed to accommodate that program.

The Council of Educational Facility Planners indicate that educational specifications or program requirements are the means by which the educator describe the educational activities and spaces which need to be incorporated in a proposed new or renovated facility. They are the written statements that serve as a vehicle of communication between the educator and the architect.

According to Chase, Browne, and Russo the value of educational specifications are:

- a. Stimulate more effective planning
- b. Promote economy in planning the facility
- c. Aid in determining the number and types of rooms and space to be provided.
- d. Serve the architect as a guide for building design
- e. Serve the students, faculty, and staffs as a guide to utilize the building more effectively.
- f. Provide for more cooperative planning and understanding of program objectives.
- g. Emphasize the community's objectives and aims for the vocational and technical education program.

Educational specifications include:

1. General requirements

- a. Statement of the philosophy and objectives of the community for its vocational and technical education program.
- b. A plan of the proposed vocational and technical education organization, program, and the groups to be accommodated.
- c. A description of the educational facilities needed.

2. Detailed requirements

- a. Statements of the philosophy and objectives of each of the student offerings
- b. Space requirements, numbers, and kinds of rooms needed for each subject field
- c. Special utilities and service needs in shops and laboratories
- d. Relationships of spaces required or preferred
- e. Environmental factors needed or desired

3. Miscellaneous Information

- a. Traffic patterns - interior and exterior
- b. Storage
- c. Floor materials in shops and laboratories
- d. Cleaning systems
- e. Intercom, program bell, and clock systems
- f. Furniture and equipment to be housed

g. Custodial services

h. Mechanical equipment

In conclusion, the educational specification document should provide the rationale on which the architect will base the design of the facility.

These three broad areas are suggested as a means of assisting the student in understanding educational specifications. The instructor may choose to have him discuss other aspects of educational specifications or take time to discuss the student's answers and have the student to elaborate on certain points of his discussion.

- (2) Describe in writing the differences between learning (instructional) and auxiliary areas?

Learning (instructional) spaces are perhaps the most important areas in an educational facility. They are where the teaching-learning functions of a school occur. It is in these spaces that students react to the various impulses in the educational environment afforded by an expanding array of communication media, interact with other students and with teachers, and become actively involved in the process of directing their own learning. The basic premise for developing all learning spaces must be to serve the educational needs of the students.

Auxiliary spaces in educational facilities are those which support the instructional program and accommodate out-of-classroom need of both students and staff. Richard Meckley states that auxiliary areas are building areas utilized to aid the learning program but not designed specifically for instructional activities. Examples are the instructional materials center and the auditorium. Others may include such areas as food service, student commons, and spaces for administrative, counseling and health services.

- (3) Name three principle kinds of learning areas and categorize the modes of student learning occurring in each?

Meckley suggests that there are three principle kinds of learning areas and include lecture/demonstration, seminar, and laboratories.

The three kinds of learning areas can also be categorized by the mode of student learning which normally occurs in them. Lecture/demonstration areas are normally used for student reaction learning with the major emphasis on instruction. Seminar areas are designed for student interaction learning with major emphasis on total students interaction. Laboratories are for the purpose of individual action learning by each student.

The Council of Educational Facilities places the emphasis upon student learning activities rather than areas. Thus they identify three principle kinds of learning activities as reaction, interaction, and action. They in turn discuss these learning activities in relation to the type of learning area conducive to the specific activity.

The instructor may choose to discuss with the student some general implications for learning spaces. Ideas relating the suitable arrangements of each area may prove very beneficial at this point. This would give the student an opportunity to discuss his idea and opinions on selected learning areas. For instance, selected readings on designing laboratory facilities and its relationship to the learning process will help prepare the student more effectively for the final task of this module.

- (4) List and describe some of the more important planning considerations involved in the planning of occupational preparation facilities, with specific emphasis being placed upon both learning and auxiliary areas?

Learning Areas--Meckley indicates planning considerations for learning areas need to be given to spatial relationships of the area to other areas within and outside the building, instructional and learning activities which will occur within the area, major furniture and equipment needs for the area, environmental requirements for the planned area and minimum floor space requirements to meet standards set by accrediting and governmental agencies.

1. Spatial relationship--Should the area being planned have immediate access to and from the learning materials center, seminar areas, the building entrance, etc; should the learning area be located on the ground floor, in a quiet section of the building, etc.?

2. Instructional and learning activities-
The activities of the teachers and students should be planned to meet established educational objectives; the learning area, in turn, should be planned to facilitate instructional and learning activities. For example:

- a. Lecture/demonstration areas should be planned for student reaction learning activities such as the taking of notes, listening to lectures, observing demonstrations, and viewing films, slides, etc.
- b. Seminar areas should be planned for student interaction learning activities such as small-group discussions, displaying materials, etc.
- c. Laboratory areas should be planned for individual student action learning activities such as preparing chemical solutions, giving dental x-rays, welding, etc.
- d. Multi-use areas should be planned for the kinds of instructional and learning activities which would occur in two or more of the three specialized instructional areas. An example of multi-use area is a combination lecture and laboratory area.

3. Major Furniture and Equipment-A description of major furniture and equipment needs which include quantities required, minimum performance specifications, approximate dimensions, special utility requirements, whether built in or portable, and storage requirements.

4. Environmental conditions-

- a. Aesthetic considerations which include architectural style, colors, and lighting.
- b. Thermal conditions which include air temperature control, radiant temperature, air conditioning, etc.
- c. Visual requirements needed for accuracy in perception, attention to tasks, and speed of performance.

- d. Sonic considerations which include special acoustical and sound amplification needs.
 - e. Safety considerations which include emergency power shut-off switches, non-slip floorings, and fire protection equipment.
5. Minimum Floor Space Requirements--Some states have space requirements for instructional areas of each occupational program area and must conform to set standards.

Auxiliary Areas--In planning auxiliary facilities, considerations should be given to:

- a. Flexibility--A key concept in planning. These spaces should be planned in a way that will prevent their obsolescence due to significant program changes in future years and should accommodate a wide range of current activities and uses. The degree of flexibility provided will depend upon local decisions with respect to use of auxiliary facilities for various educational and non-educational purposes. If some auxiliary areas are to be used for both instructional and non-instructional purposes (eg., the auditorium), provision must be made for adapting the space to both purposes readily.
- b. Greater Community Demands on Auxiliary Facilities--The trend in recent years has been toward providing occupational education to persons of all ages and backgrounds. It can be expected that with time there will be much greater community use of various auxiliary facilities within occupational education schools. Greater use of auxiliary facilities by members of the community will result in higher utilization of space and thus make them better financial investments.

- c. Independent and Dependent Planning Solutions-Local planning to some extent, becomes dependent on state, regional and national needs. Planning should also take into account population mobility. This would mean the program should not be based solely on local employment opportunities.
- d. Cost of Quality in Planning Auxiliary Facilities- The attitude of tax payers must be taken into account in planning. Planning for auxiliary facilities should be realistic and geared to higher utilizations than has been true in the past.

These are only a few of the general considerations the student could also be asked to express his ideas concerning specific occupational preparation program and would thus be better prepared and capable of performing task #5. An example would be to have the student give his views on areas such as an enclosed teacher's office being recommended for laboratories that are dusty and noisy. Also, the office should be located in such a manner as to allow the instructor to observe the laboratory.